



The Joint Service Small Arms Program (JSSAP)

Personalized Weapons
Technology Project

NJIT

NJIT is a Public Research University

**The TACOM-ARDEC support of the
Personalized Weapons Program**

*Transforming
the
Force*

Stephen C. Small, Ph. D.

Report Documentation Page		
Report Date 13Aug2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle The TACOM-ARDEC Support of the Personalized Weapons Program	Contract Number	
	Grant Number	
	Program Element Number	
Author(s) Small, Stephen C.	Project Number	
	Task Number	
	Work Unit Number	
Performing Organization Name(s) and Address(es) The Joint Service Small Arms The Joint Service Small Arms Program Program (JSSAP)	Performing Organization Report Number	
Sponsoring/Monitoring Agency Name(s) and Address(es) NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061	Sponsor/Monitor's Acronym(s)	
	Sponsor/Monitor's Report Number(s)	
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes Proceedings from the 2001 Joint Services Small Arms Symposium, Exhibition & Firing Demonstration 13-16 August 2001 Sponsored by NDIA, The original document contains color images.		
Abstract		
Subject Terms		
Report Classification unclassified	Classification of this page unclassified	
Classification of Abstract unclassified	Limitation of Abstract UU	
Number of Pages 20		

Background

- July 2000 – ARDEC Technical Director Signs Memorandum Of Understanding With The New Jersey Institute Of Technology (NJIT)



NJIT/ARDEC MOU

Purpose:

- Collaboration in the research and development of smart gun technologies for military and civilian application
- Shared use of research and test facilities
- Joint pursuit of smart gun technology transfer between government, academic and private sector organizations

NJIT Project Plan

- Phase 1 - Literature Search
- Phase 2 - Tech Selection
and Evaluation
- Phase 3 - Prototype Modeling/Fabrication
- Phase 4 - Prototype Simulation/Evaluation



The Stakeholders

- Law Enforcement
- Civil Community
- Military?



Working Definition of Personalized Weapon



- A firearm whose capability to be fired is biometrically, mechanically, or otherwise safely rendered “authorized” user(s)-only operational



Possible military off-ramps/on-ramps

- Anti-Theft/Tracing.
- Identification Friend or Foe





Conference Agenda



8:30 a.m. Wednesday 21 March

Phase 1 – Plenary Session

- Welcoming – LTC Michael Padgett – Deputy Commander ARDEC
- NJIT Personalized Weapons Project Overview- Dr. Donald Sebastian





Conference Agenda

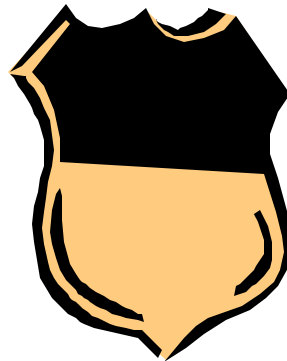


Wednesday 21 March

- NJIT Technology Investigations
 - Dr. Dentcho Ivanov and Dr. Michael Reece
- National Institute of Justice (NIJ) Smart Gun Update - Mr. Chris Miles
- Defense Advanced Research Projects Agency (DARPA) Commentary - Dr. Ed Carapezza



**For more information
on the "Smart Gun"
Solicitation,
visit:
(www.ncjrs.org)**





Conference Agenda

Wednesday 21 March

- Close Combat Armaments Center (CCAC) Recent Assessment – Mr. Lucian Sadowski
- FNH USA, Inc. – Mr. Louis Dillais
- Metal Storm CEO – Mr. Mike O'Dwyer



[illegible]



Conference Agenda

Thursday 22 March

- **Applications Working Group**
- **Technology Working Group**
- **Coordination Working Group**



The Questions

Is it authorized user(s)-only operational?

- **Is it “here & now” regards its maturity?**
- **How might firearm architecture be best impaired?**

What (if any) are the military off-ramps/on-ramps?

- **IFF?**
- **Anti-Theft/Tracing?**
- **Other?**

Initial Technologies Reviewed

- Radio Frequency Tags
- Remote Control
- Touch Memory
- Lock Systems
- Biometrics I.D./Recognition



Conference Survey and Assessment

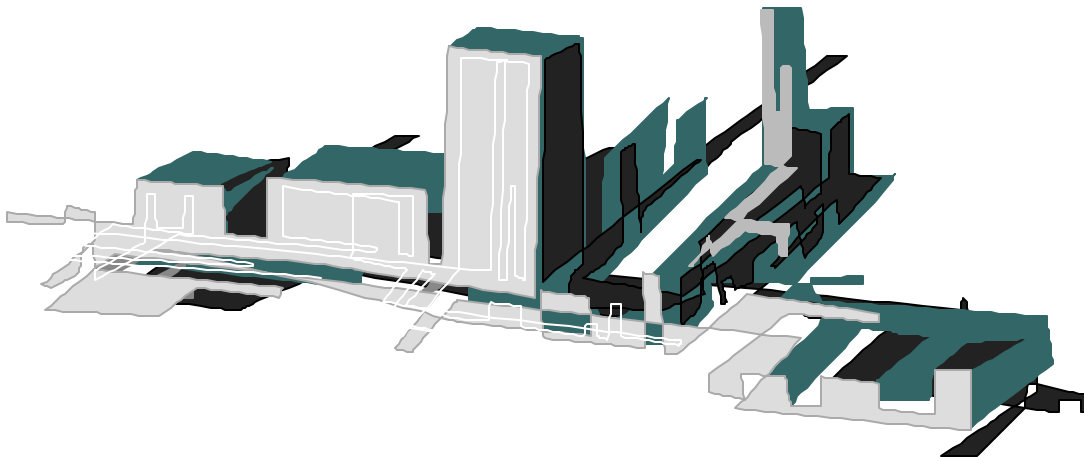
- Reliability
- Implementation Time Frame
- Stakeholder Contribution



Project Survey and Assessment

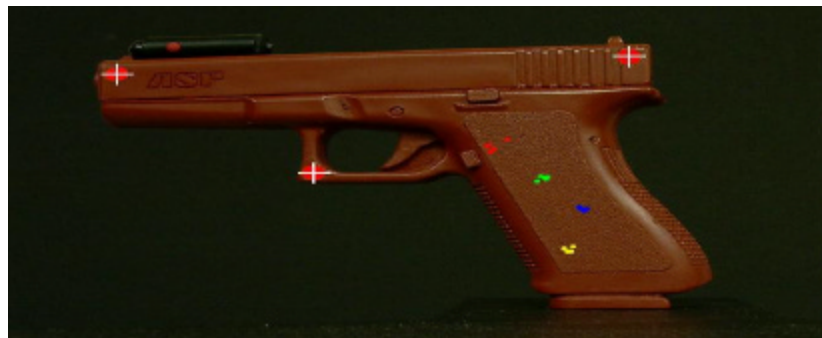
- Initial Technologies Reviewed
(continued)

- Voice
- Fingerprint
- Grip Pattern

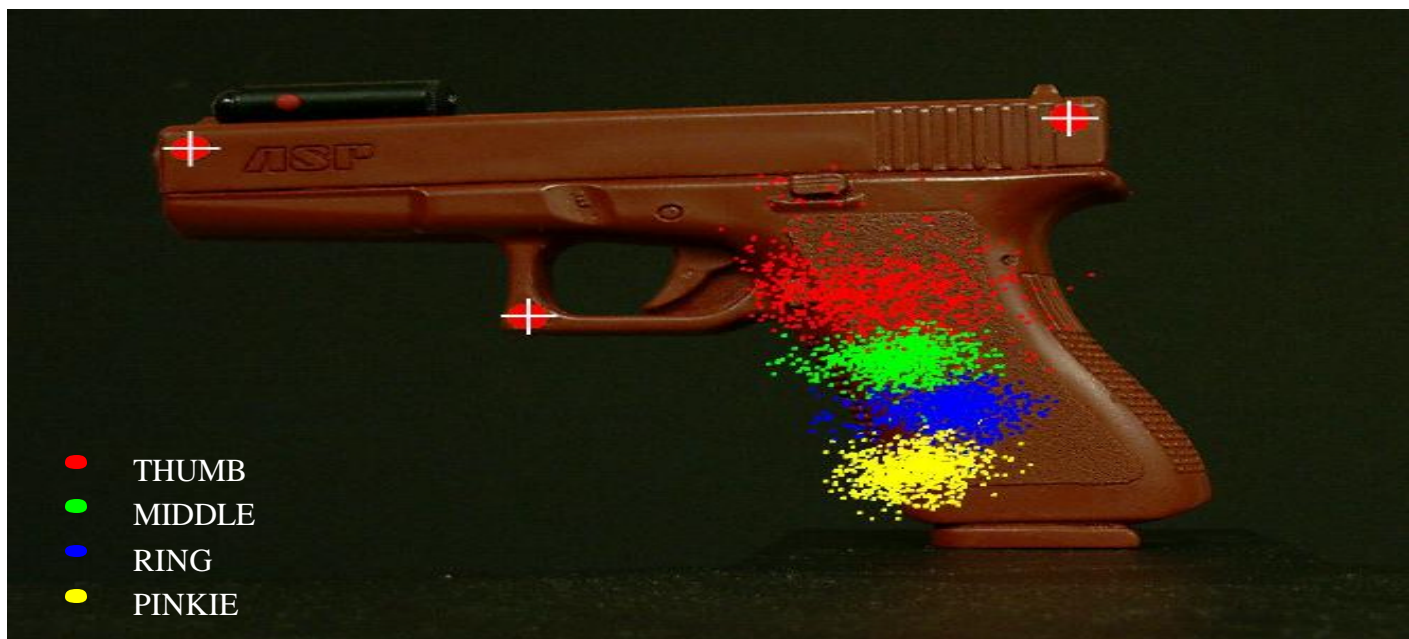




(a)



(b)



Plans

- Meeting Report Draft Prepared: August 2001
- Coordinate and Refine Investment Strategy
- Industry Involvement
 - Law Enforcement/Civil Focus
 - Possible Military Off-ramps



Stephen C. Small, Ph. D.

(973) 724-7043

Ssmall@pica.army.mil

